JAN 2 6 1994

AGWAY INC., PO BOX 4933, SYRACUSE, NEW YORK 13221-4933

January 24, 1994

Mr. Michael Young
Assistant Hazardous Materials Specialist
State of Vermont
Department of Environmental Conservation
103 South Main Street
West Office Building
Waterbury, VT 05671-3888

Re: Site # 92 - 1208
Former Petroleum Bulk Storage Facility
Berlin, VT

Dear Mr. Young:

Enclosed for your review is a report prepared by Hydro-Environmental Technologies, Inc. (HETI) of Acton, MA, describing additional activities performed as part of an on going ground water investigation at the above referenced location.

Based upon the analytical results and the conclusions contained in this report, Agway proposes to conduct one additional round of sampling in wells HN-3, WP-1, WP-2, MW-2, and MW-3, to be conducted in May or June, 1994. Based upon receiving analytical results consistent with the results contained in this report, Agway shall request closure of the site at this time.

Please contact me with any questions or comments you may have at the above address or at 315-449-7430.

Sincerely,

James E. Clark
Project Geologist

Enclosure

cc: B. West
L. Benton

HYDRO ENVIRONMENTAL TECHNOLOGIES, INC.

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Acton, MA 01720
Tel 508-263-4044
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1-800-347-HETI
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JAN 26 1994

January 3, 1994

Mr. James E. Clark
Agway Energy Products
P.O. Box 4852
Syracuse, New York 13221-4852

RE: Floor Drain/Sump Closure
Ground Water Sampling
Agway Bulk Storage Facility
Site #93-1208
245 Barre-Montpelier Road (Route 302)
Berlin, Vermont

Dear Jim:

The purpose of this letter is to report on the floor drain/sump closure, ground water sampling, and sediment sampling from the Stevens Branch River. This work was performed by Hydro-Environmental Technologies, Inc. (HETI) on behalf of Agway Energy Products (Agway) at the above-referenced site. The site location is shown in Figure 1, the Site Location Map.

1.0 BACKGROUND

The property is unoccupied and had a long history of use for the bulk storage and retail sale of petroleum fuels, including gasoline, #2 fuel oil, and kerosene. Petroleum products were stored in aboveground and underground tanks, and automotive repairs were performed at the site.

The site abuts the Stevens Branch of the Winooski River (Stevens Branch). The site is situated on a terrace created by filling above the natural grade, which slopes down to the river. The fill thickness increases towards the river, to a maximum thickness of approximately 10 feet. The fill consists of granite rubble.

HETI submitted a work scope to Agway, dated June 24, 1992, for additional investigations at the site. In a letter dated July 24, 1992, Mr. Michael Young of the Vermont Agency of Natural Resources, Department of Environmental Conservation (DEC) requested modifications to the work scope. The work scope was revised and re-submitted to Agway on August 20, 1992, and subsequently approved by the DEC.

HETI executed most of the approved scope of work during the period December, 1992 through January, 1993. Frozen conditions prevented completion of portions of the scope. The investigation was

documented in a report submitted by HETI to Agway dated March 9, 1993. Refer to that report for more detailed information regarding the site. Two-inch diameter monitoring wells, numbered MW-1D, MW-2, MW-2D, MW-3D and MW-4, were installed in borings B-1D, B-2, B-2D, B-3D and B-4, respectively. Deep wells MW-1D, MW-2D, and MW-3D were installed as couplets to existing wells HN-2, MW-2. and HN-3, respectively. Two well points were installed to evaluate impacts on the Stevens River. Frozen conditions prevented completion of portions of the scope. The investigation was documented in a report submitted by HETI to Agway, dated March 9, 1993.

Benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH) and polynuclear aromatic hydrocarbons (PAH) were reported in a sediment sample from boring B-2. BTEX, TPH, and PAH were not reported in any other sediment samples. Methyl tertiary butyl ether (MTBE) was not reported in any sediment samples.

Ground water samples were collected from monitoring wells and well points. BTEX, TPH and PAH were reported in the samples from HN-3 and MW-2. TPH was also reported in the sample from MW-2D. BTEX, TPH, and PAH were not reported in any other water samples. MTBE was not reported in any samples.

Due to snow and ice, HETI was unable to complete a few of the field tasks originally proposed. In June 14, 1993 correspondence, the DEC requested that the unfinished tasks be completed, that an additional round of ground water sampling be conducted and that the floor drain be emptied and closed.

2.0 SITE DESCRIPTION

As shown in Figure 1, the site is located on the southwest side of Barre-Montpelier Road (Route 302) in Berlin, Vermont. The site abuts the Stevens Branch of the Winooski River. The river flows to the northwest along the site's southwest border. A steep bank, approximately 15 feet high, leads down to the river from the relatively flat, developed portion of the property. There is an abandoned garage/warehouse building located in the central portion of the site. A floor drain/sump is located in the approximate center of the garage floor. A former petroleum bulk storage area, which included five aboveground and three underground storage tanks, was located in the southeast part of the site. The tanks are no longer present at the site.

The top approximately 10 feet of material encountered during drilling, consisted of fill made up primarily of granite rubble and poorly sorted sand. Sediments encountered below the fill included

a 7 to 10 foot thick layer of fine sand with some silt, and a 5 to 8 foot thick layer of fine sand, with some silt and a little gravel. Sediments encountered between approximately 25 and 35 feet were primarily fine sand with some silt.

Bedrock outcrops were not observed at the site and bedrock was not encountered in the three deep borings advanced by HETI to a depth of 35 feet.

3.0 FLOOR SUMP AND DRAIN CLOSURE

The sump was located near the center of the garage portion of the building. The sump, which contained 2 compartments partially separated by a vertical baffle, appeared to be an oil-water separator with a cast-iron outflow pipe. The access to the separator was through a diamond steel plate in the concrete floor. The metal plate covered a portion of the separator; the remainder of the separator was under the floor. The opening of the outflow pipe was located near the bottom of the drain sump, and was buried beneath approximately 14 inches of sediment and liquid (sludge).

On November 15, 1993, approximately 3-inches of fluid were bailed from the sump. Most of the sludge was then removed from the sump with a posthole digger and shovel. The reinforced concrete floor above the sump was saw-cut and broken up with a demolition hammer. The cast iron pipe and concrete debris were removed and the remaining sludge was scraped from the bottom and side walls of the sump. On November 16, 1993, the sidewalls and bottom of the sump were wiped with clean rags. The sump was filled with new concrete finished at grade with the existing surrounding floor.

The fluid and sludge were transferred from the sump to a 55-gallon DOT-approved drum. Approximately 35 gallons of liquid and sludge were removed from the sump. The fluid and sludge had a strong ammonia odor, and the fluid had a pH of between 8 and 9. The drum was sealed and labeled. On November 16, 1993 the drum was picked up by Pollution Solutions of Vermont, Inc., of Williston, Vermont and transported to their Williston, Vermont facility, under hazardous waste manifest # VT0056646, for incineration. A copy of the manifest is attached.

The final discharge point of the outlet drain from the sump is unknown. Three ports were present in the floor of the garage interior. The port located closest to the sump was removed during closure of the sump. The other two ports were filled with a light brown granulated substance which prohibited any further inspection or probing. Due to the orientation of the ports, it was previously inferred that the sump discharge line may have connected to a

former runoff collection system in the loading rack area. A pipe from the runoff collection system extended from the loading area surface, through the berm atop the embankment, and protruded from the river bank to an out-fall at the edge of the river. This pipe was originally inferred to be the discharge point for the former runoff collection system for the loading rack area.

Inspection of the pipe during November, 1993, in the absence of snow cover, revealed that the pipe is solely for discharging run-off from the loading rack area and is not connected to the floor drain system. The river embankment was inspected on November 16, 1993 and two 4-inch diameter iron pipes were found protruding from the riprapped embankment south west of the floor drain. No surface staining was observed. It is unknown if the two pipes were part of the floor drain system. Refer to Figure 3 for the location of the two pipes.

4.0 RIVER SEDIMENT SAMPLING

The scope of work proposed the collection of a total of 6 sediment samples from the river bottom, upstream, downstream of the drain pipe, and near the out-fall of the drain pipe. Therefore, river sediment samples were collected from upstream of the two iron pipes, near the pipe out-falls, and downstream of the two pipes. A total of 6 sediment samples were collected. Samples were collected at depths of between 2 inches and 6 inches below the river bed. Refer to Figure 3, Sediment Sample Location Map, for the locations of the sediment samples.

The samples were collected in clean glass containers with Teflon cap liners and chilled. The samples were submitted under chain of custody to New England Testing Laboratory (NETL) of North Providence, Rhode Island for analyses for volatile aromatic hydrocarbons (VOC) by EPA Method 8020 and polynuclear aromatic hydrocarbons (PAH) by EPA Method 8100. No VOC or PAH were reported in the samples.

5.0 GROUND WATER

5.1 Water Table Topography and Ground Water Flow

The locations and elevations of the five monitoring wells and two well points installed by HETI, and of the four wells previously installed by others, were surveyed by HETI personnel on November 16, 1993. Elevations were referenced to an arbitrary 100-foot datum at the garage floor, as indicated on Figure 3. Measurements of depth to ground water in the monitoring wells were

made with an interface probe on November 16, 1993. The probe is capable of measuring depth to water and separate-phase product to the nearest 0.01 foot. The depths to water in the two well points (WP-1 and WP-2) were gauged using a tape measure. No separate-phase product was detected in any of the monitoring wells or well points. Depth to water ranged between 1.81 feet in WP-2 to 16.36 feet in HN-2. Well gauging data is summarized in Table 1. The depth to water readings for the 6 shallow-screened (water table) wells and well points were coupled with the survey data to produce Figure 4, the Water Table Topography Map. The ground water flow at the site was interpreted to be generally to the southwest. The average horizontal hydraulic gradient on January 19, 1993 was approximately 0.03.

The water level in WP-1, screened below the river bottom, was the same as that in the river. This suggests that there is good hydraulic connection between the river and the ground water beneath it, which is consistent with the observation of rocky, coarse sediment on the river bottom. There had been significant rain the day prior to HETI's field work. Figure 3 indicates that on November 16, 1993, the river stage was above the water table in WP-2, located on the river bank. The river was therefore a losing stream on November 16, 1993.

The water levels in monitoring wells MW-1D, MW-2D and MW-3D, which are screened below the water table, were not used in preparation of Figure 4. Deep wells MW-1D, MW-2D and MW-3D are couplets with shallow wells HN-2, MW-2 and MW-3, respectively. Based on ground water elevation differences, the vertical hydraulic gradients at well couplets MW-1D/HN-2, MW-2D/MW-2 and MW-3D/HN-3 on November 19, 1993 were 0.11, 0.2, and 0.19 upward. Similar upward vertical gradients were measured during HETI's previous field work on January 16, 1993.

5.2 Ground Water Sampling and Analyses

Ground water samples were collected from monitoring wells and well points on November 16, 1993. An outline of HETI's standard sampling protocol for analysis of volatile organics (including BTEX and MTBE), which was followed during this investigation is attached. Ground water sampled from all nine monitoring wells and the two well points were submitted under chain of custody to NETL and analyzed for BTEX and MTBE by EPA Method 8020 and for TPH by EPA Method 418.1. Samples were collected from MW-2, MW-2D, MW-3D, and HN-3 and well points WP-1 and WP-2 for analysis for PAH by EPA Method 8100. Sample containers from each well were filled in the order TPH, BTEX and, when applicable, PAH. BTEX and MTBE were not reported in any of the samples. TPH was reported in the sample

from WP-2 at a concentration of 9.3 ppm. PAHs were reported in the samples from HN-3 and WP-2 at total concentrations of 5.4 ppb, and 26.7 ppb, respectively. TPH and PAH were not reported in any other ground water samples. The results of the ground water analyses are shown in Tables 2 and 3 which also include the results of analyses of samples collected by HETI on December 10, 1992 and January 18, 1993.

The results of this sampling are generally consistent with HETI's previous sampling (i.e. contaminant concentrations were low or below reporting limits), except TPH was reported in ground water from HN-3 during this sampling round, but 120 ppm TPH were reported in the December 10, 1992 sample from HN-3.

5.3 Quality Assurance/Quality Control

For quality assurance/quality control (QA/QC) purposes, a trip blank and duplicate samples were submitted for laboratory analyses. The trip blank, consisting of distilled water, was brought to the field in the same cooler as the sample vials, kept with the samples, and transported to the laboratory with the other samples. No BTEX, MTBE, PAH or TPH were reported in the trip blank. The duplicate samples of ground water from wells MW-4 and MW-3D were identified on the chain-of-custody and laboratory report as Duplicate #1 and Duplicate #2, respectively. Duplicate #1 was analyzed for TPH and BTEX. No analytes were reported in either sample from MW-4. Duplicate #2 was analyzed for PAH. No analytes were detected in either sample from MW-3.

6.0 SUMMARY AND CONCLUSIONS

1. The site is unoccupied and abuts the Stevens Branch of the Winooski River. The property has a long history of use for the bulk storage and retail sale of petroleum fuels, including gasoline, #2 fuel oil, and kerosene. Petroleum products were stored in aboveground and underground tanks.

2. On November 15 and 16, 1993 a floor drain/sump in the concrete floor of the former garage/warehouse building was closed. Sludge and a drain pipe were removed from the sump. The sidewalls and bottom of the sump were wiped and the sump was filled with new concrete. Approximately 35 gallons of liquid and sludge removed from the sump were transported by Pollution Solutions of Vermont, Inc. to their Williston, Vermont facility under hazardous waste manifest # VT0056646 for incineration.

The former discharge point of the floor drain line is unknown. Prior inspection of the facility during January, 1993 suggested

that the drain connected with a surface water runoff collection system. However, inspection during this investigation, in the absence of snow cover, revealed that the pipe is not connected to the floor drain system. Two 4-inch diameter iron pipes were found in the river embankment behind the former garage/warehouse. These may have been discharge lines for the drain.

3. Six sediment samples were collected from the stream bed in the vicinity of the two pipes. The samples were collected from upstream, near, and downstream of the pipe outfalls. The samples were submitted for analyses for BTEX and MTBE (VOC) by EPA Method 8020 and PAH by EPA Method 8100. No VOC or PAH were reported in the samples.

4. Separate-phase product was not detected in any of the on-site wells. The ground water flow at the site was interpreted to be generally to the southwest. The average horizontal hydraulic gradient was approximately 0.03. The average vertical hydraulic gradient in the three deep/shallow well couplets on November 16, 1993 was 0.17 upward.

5. The ground water under the Stevens Branch appears to have a good hydraulic connection with surface water in the river. The Stevens Branch appeared to be a losing stream on November 16, 1993, perhaps due to heavy rainfall in preceding days.

6. PAH were reported in the ground water samples from HN-3 and WP-2 at total concentrations of 5.4 ppb, and 26.7 ppb, respectively. TPH was reported in the sample from WP-2 at a concentration of 9.3 ppm. BTEX and MTBE were not reported in any of the samples. TPH and PAH were not reported in any other samples.

7. The data presented in this report and in HETI's March 9, 1993 report suggest that releases at the site have resulted in only localized impact on subsurface soil, river sediment, and ground water quality. Soil contamination was detected in only one boring, B-2, located in the former aboveground tank area. No contamination of river sediments was reported. Generally low concentrations of contaminants were detected in one of two sampling events in water sampled from wells in the former aboveground tank area. During the most recent sampling, no contaminants were reported in ground water samples from that area. Low contaminant concentrations were reported in water from WP-2, located on the bank of Stevens Branch. The presence of contamination in water from WP-2 suggests that a minor discharge of dissolved contaminants might occur if the Stevens Branch is a gaining stream at other times of the year.

7.0 RECOMMENDATIONS

1. HETI recommends that the Vermont Agency of Natural Resources, Department of Environmental Conservation be provided a copy of this report, and that the site be closed.

2. HETI recommends one sampling round of selected wells (HN-3, WP-1, WP-2, MW-2 and MW-2D) during the summer of 1994. If those results are consistent with the results presented in this report and in HETI's March 9, 1993 report, HETI believes that regulatory closing of the site would be justified.

8.0 LIMITATIONS

This site assessment and report were prepared for the exclusive use of Agway Energy Products. The conclusions provided by Hydro-Environmental Technologies, Inc. in this assessment are based solely on the information reported in this document. Investigative site information which was not available to Hydro-Environmental Technologies, Inc. at the time of this assessment may result in a modification of the conclusions stated above. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur. This report has been prepared in accordance with generally accepted hydro-geologic practices. No other warranty, expressed or implied, is made.

Please contact us if you have any questions.

Sincerely,
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

Eric M. Johnson
Senior Geologist

Hayden S. Solomon, C.P.G.
President

EMJ/HSS/mms

HYDRO
ENVIRONMENTAL
TECHNOLOGIES, INC.

List of Attachments

Agway Petroleum Products
Barre-Montpelier Road
Berlin, Vermont

Table 1 - Well Gauging Data
Table 2 - Summary of Sediment Analytical Results, Volatile Aromatics and Total Petroleum Hydrocarbons
Table 3 - Summary of Sediment Analytical Results, Polynuclear Aromatic Hydrocarbons

Figure 1 - Site Location Map
Figure 2 - Site Plan
Figure 3 - Sediment Sample Location map
Figure 4 - Water Table Topography Map November 16, 1993
Figure 5 - Groundwater Contaminant Concentration Map, November 16, 1993 Polynuclear Aromatic Hydrocarbons

Ground Water Sampling Protocol
Laboratory Reports
Hazardous Waste Manifest

TABLE 1

WELL GAUGING DATA

FOR: AGWAY ENERGY PRODUCTS SITE: BERLIN, VERMONT

WATER TABLE ELEVATION CORRECTED FOR FREE PRODUCT BY ASSUMING PRODUCT SPECIFIC GRAVITY = 0.72

DATE	WELL #	WATER DEPTH (FEET)	PRODUCT DEPTH (FEET)	PRODUCT THICKNESS	WATER TABLE ELEVATION	CORRECTED WATER ELEVATION	WELL ELEV.
11/16/93	HN-1	14.04	0.00	0.00	86.69	86.69	100.73
11/16/93	HN-2	16.36	0.00	0.00	84.47	84.47	100.83
11/16/93	HN-3	14.25	0.00	0.00	84.72	84.72	98.97
11/16/93	HN-4	14.21	0.00	0.00	84.72	84.72	98.93
11/16/93	MW-1D	10.47	0.00	0.00	87.59	87.59	98.06
11/16/93	MW-2	13.89	0.00	0.00	84.74	84.74	98.63
11/16/93	MW-2D	10.22	0.00	0.00	88.46	88.46	98.68
11/16/93	MW-3D	10.51	0.00	0.00	88.32	88.32	98.83
11/16/93	MW-4	12.67	0.00	0.00	86.64	86.64	99.31
11/16/93	WP-1	1.81	0.00	0.00	85.08	85.08	86.89
11/16/93	WP-2	8.46	0.00	0.00	84.39	84.39	92.85

TABLE 2

SUMMARY OF GROUND WATER ANALYTICAL RESULTS
Volatile Aromatics by EPA Method 8020
Total Petroleum Hydrocarbons by EPA Method 418.1

AGWAY ENERGY PRODUCTS
295 BARRE-MONTPELIER ROAD
BERLIN, VERMONT

PARAMETER	HN-1	HN-1	HN-2	HN-2	HN-3	HN-3	HN-4	HN-4	MW-1D	MW-1D	REPORTING UNITS
MTBE	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Benzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Toluene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Chlorobenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Ethylbenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Xylene	BRL	BRL	BRL	BRL	1	BRL	BRL	BRL	BRL	BRL	µg/l
1,3-Dichlorobenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
1,4-Dichlorobenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
1,2-Dichlorobenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Total BTEX	BRL	BRL	BRL	BRL	1	BRL	BRL	BRL	BRL	BRL	µg/l
TPH	BRL	BRL	BRL	BRL	120	BRL	BRL	BRL	BRL	BRL	mg/l
Sampling Date	12/10/92	11/16/93	12/10/92	11/16/93	12/10/92	11/16/93	12/10/92	11/16/93	01/18/93	11/16/93	NA

TABLE 2

SUMMARY OF GROUND WATER ANALYTICAL RESULTS
Volatile Aromatics by EPA Method 8020
Total Petroleum Hydrocarbons by EPA Method 418.1

AGWAY ENERGY PRODUCTS
295 BARRE-MONTPELIER ROAD
BERLIN, VERMONT

PARAMETER	MW-2*	MW-2	MW-2D	MW-2D	MW-3D	MW-3D	MW-4	MW-4*	SW-1	WP-1	WP-2	REPORTING UNITS
MTBE	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Benzene	0.5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Toluene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Chlorobenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Ethylbenzene	2.5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Xylene	3.5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
1,3-Dichlorobenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
1,4-Dichlorobenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
1,2-Dichlorobenzene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
Total BTEX	6.5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	µg/l
TPH	11	BRL	3.6	BRL	BRL	BRL	BRL	BRL	BRL	BRL	9.3	mg/l
Sampling Date	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93	11/16/93	NA

* Average of duplicate analyses
BRL = Below Reporting Limit
MTBE = Methyl Tertiary Butyl Ether
SW-1 = Surface Water Sample from the Stevens Branch
NA = Not Applicable
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes.
TPH = Total Petroleum Hydrocarbons

TABLE 5

SUMMARY OF GROUND WATER ANALYTICAL RESULTS
Polynuclear Aromatic Hydrocarbons (PAH)

AGWAY ENERGY PRODUCTS
295 BARRE-MONTPELIER ROAD
BERLIN, VERMONT

PARAMETER	HN-1	HN-1	HN-2	HN-2	HN-3	HN-3	HN-4	HN-4	MW-1D	MW-1D
Acenaphthene	BRL	NT	BRL	NT	**6**	**2.4**	BRL	NT	BRL	NT
2-Chloronaphthalene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Fluoranthene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Naphthalene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Benzo (a) anthracene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Benzo (a) pyrene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Benzo (b,k) flouranthene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Chrysene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Acenaphthylene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Anthracene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Benzo (ghi) perylene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Fluorene	BRL	NT	BRL	NT	**5.65**	BRL	BRL	NT	BRL	NT
Phenanthrene	BRL	NT	BRL	NT	**22.7**	**3.0**	BRL	NT	BRL	NT
Dibenzo (a,h) anthracene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Indeno (1,2,3-cd) pyrene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
Pyrene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
1-Methylnaphthalene	BRL	NT	BRL	NT	BRL	BRL	BRL	NT	BRL	NT
2-Methylnaphthalene	BRL	NT	BRL	NT	**2.21**	BRL	BRL	NT	BRL	NT
Total PAH	BRL	NT	BRL	NT	**36.56**	BRL	BRL	NT	BRL	NT
Sampling Date	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93

TABLE 3

SUMMARY OF GROUND WATER ANALYTICAL RESULTS

Polynuclear Aromatic Hydrocarbons (PAH)

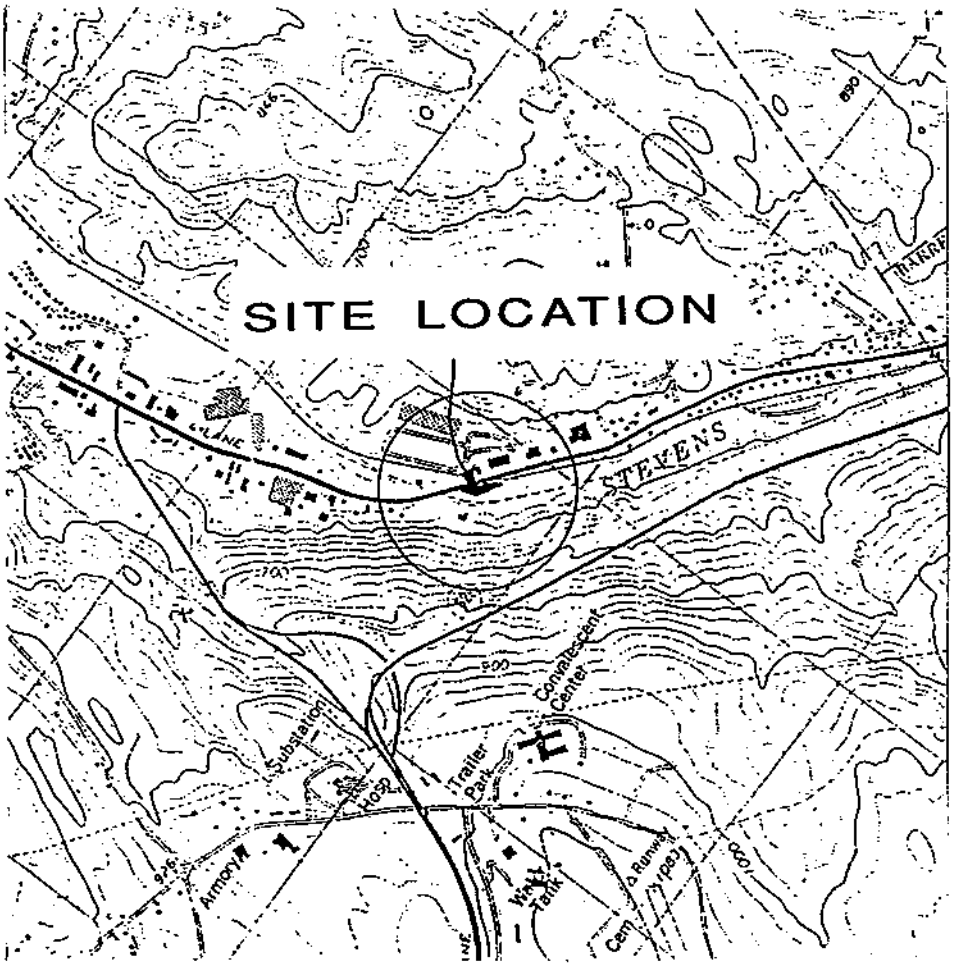
PARAMETER	MW-2*	MW-2	MW-2D	MW-2D	MW-3D	MW-3D*	MW-4	MW-4	SW-1	WP-1	WP-2
Acenaphthene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	9.0
2-Chloronaphthalene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Fluoranthene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	3.6
Naphthalene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Benzo (a) anthracene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Benzo (a) pyrene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Benzo (b,k) flouranthene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Chrysene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Acenaphthylene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Anthracene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Benzo (ghi) perylene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Fluorene	1.41	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Phenanthrene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	9.7
Dibenzo (a,h) anthracene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Indeno (1,2,3-cd) pyrene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Pyrene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	4.4
1-Methylnaphthalene	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
2-Methylnaphthalene	11.53	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Total PAH	12.94	BRL	BRL	BRL	BRL	BRL	BRL	NT	BRL	BRL	BRL
Sampling Date	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93	01/18/93	11/16/93	11/16/93

NT = Not Tested NA = Not Applicable BRL = Below Reported Detection Limit

All results reported in micrograms per liter * Average of duplicate analyses SW-1 = Surface Water Sample from Stevens Branch

Samples collected on January 18, 1993 analyzed by EPA Method 8270 Samples collected on November 16, 1993 analyzed by EPA Method 8100

Agway, Inc. 295 Barre-Montpelier Road Berlin, Vermont Site Location Map	Figure 1	Hydro-Environmental Technologies, Inc. 54 Nonset Path Acton, MA 01720



Source : Wagner, Heindel, & Noyes, Inc. - Consulting Geologists (3-24-92)

(Barre East, USGS 7.5' topographic quadrangle)

Date: 02/10/93

Revised:

Compiled by: BK

Drafted By: ECR

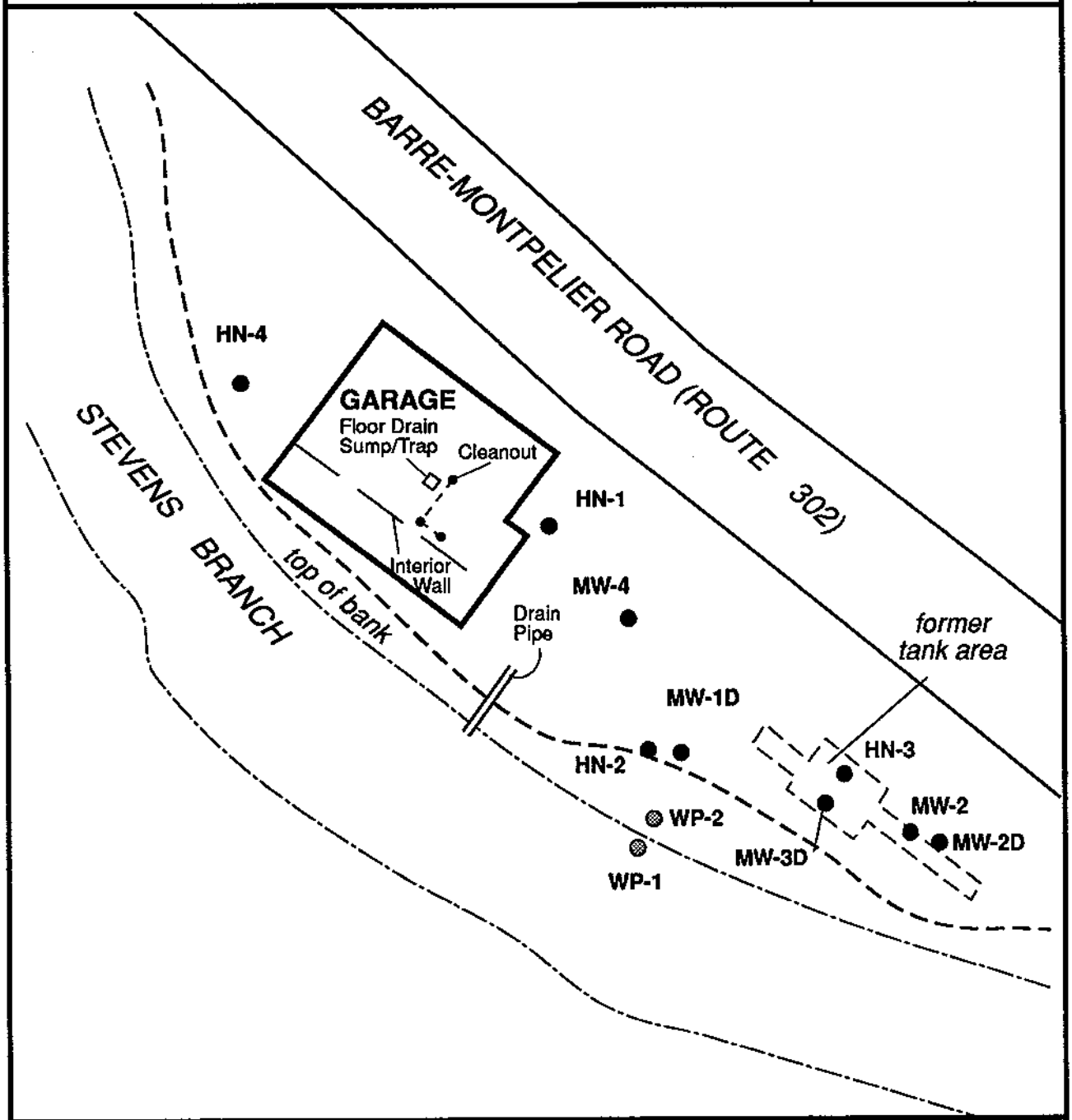
Agway, Inc.
295 Barre-Montpelier Road
Berlin, Vermont

Site Plan

Figure 2

Hydro-Environmental Technologies, Inc.

54 Nonset Path
Acton, MA 01720



MW-1 ● Monitoring Well
HN-1 ● Existing Well
WP-1 ⊗ Well Point
BM ■ Bench Mark (telephone pole)

Date: 02/17/93
Revised:
Compiled by: BK
Drafted By: ECR

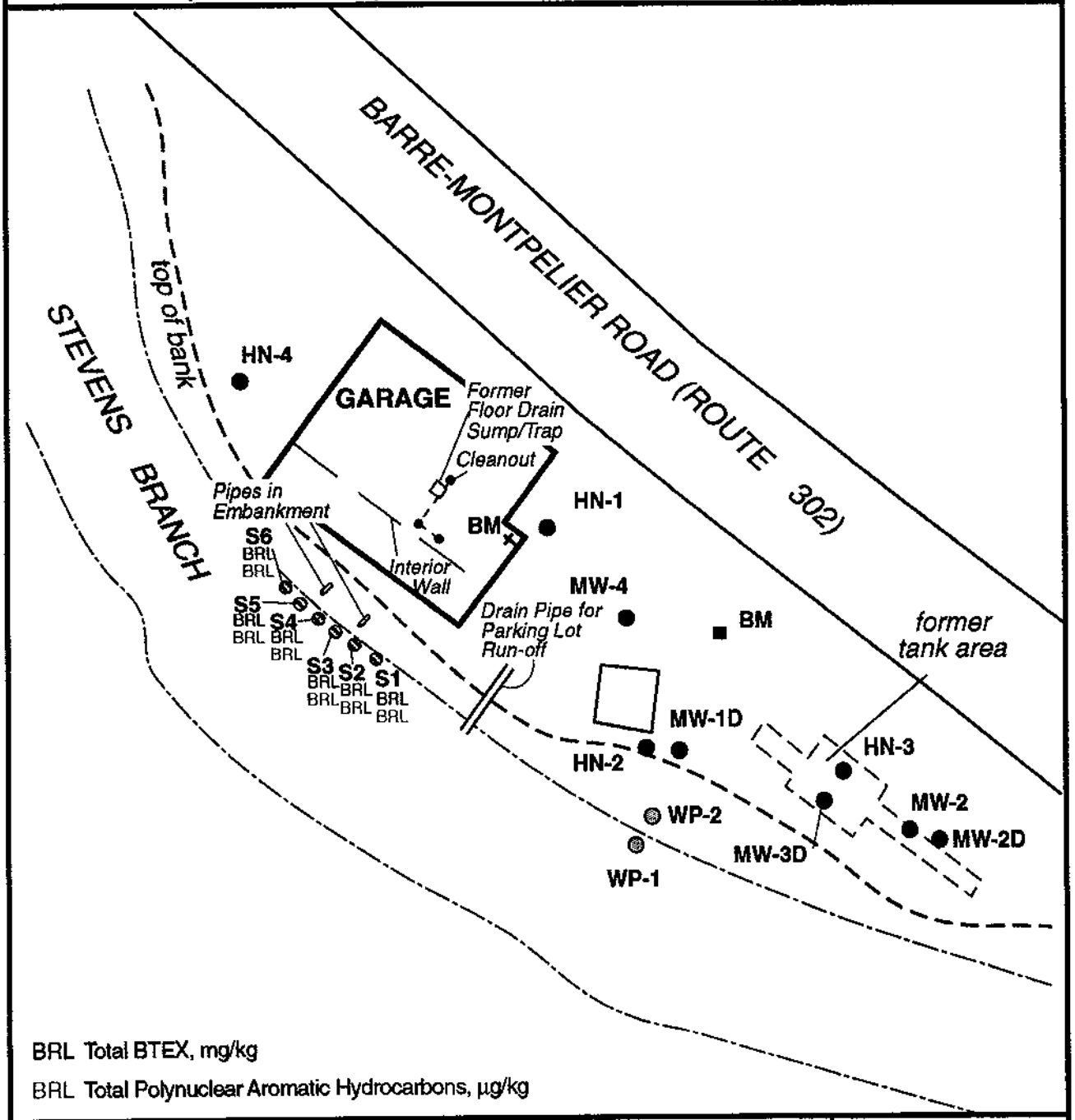
Agway, Inc.
295 Barre-Montpelier Road
Berlin, Vermont

Figure 3

Hydro-Environmental Technologies, Inc.
54 Nonset Path
Acton, MA 01720

Sediment Sample Location Map

November 16, 1993



BRL Total BTEX, mg/kg

BRL Total Polynuclear Aromatic Hydrocarbons, µg/kg

N

0 60

Feet

MW-1	●	Monitoring Well
HN-1	●	Existing Well
WP-1	◉	Well Point
S2	⊘	Soil Sample Location
BRL		Below Reporting Limit
BM	×	Bench Mark

Date: 12/15/93
Revised:
Current File: 006-808
S.S.Loc.03 93/12
Compiled by: EJ
Drafted By: NBH

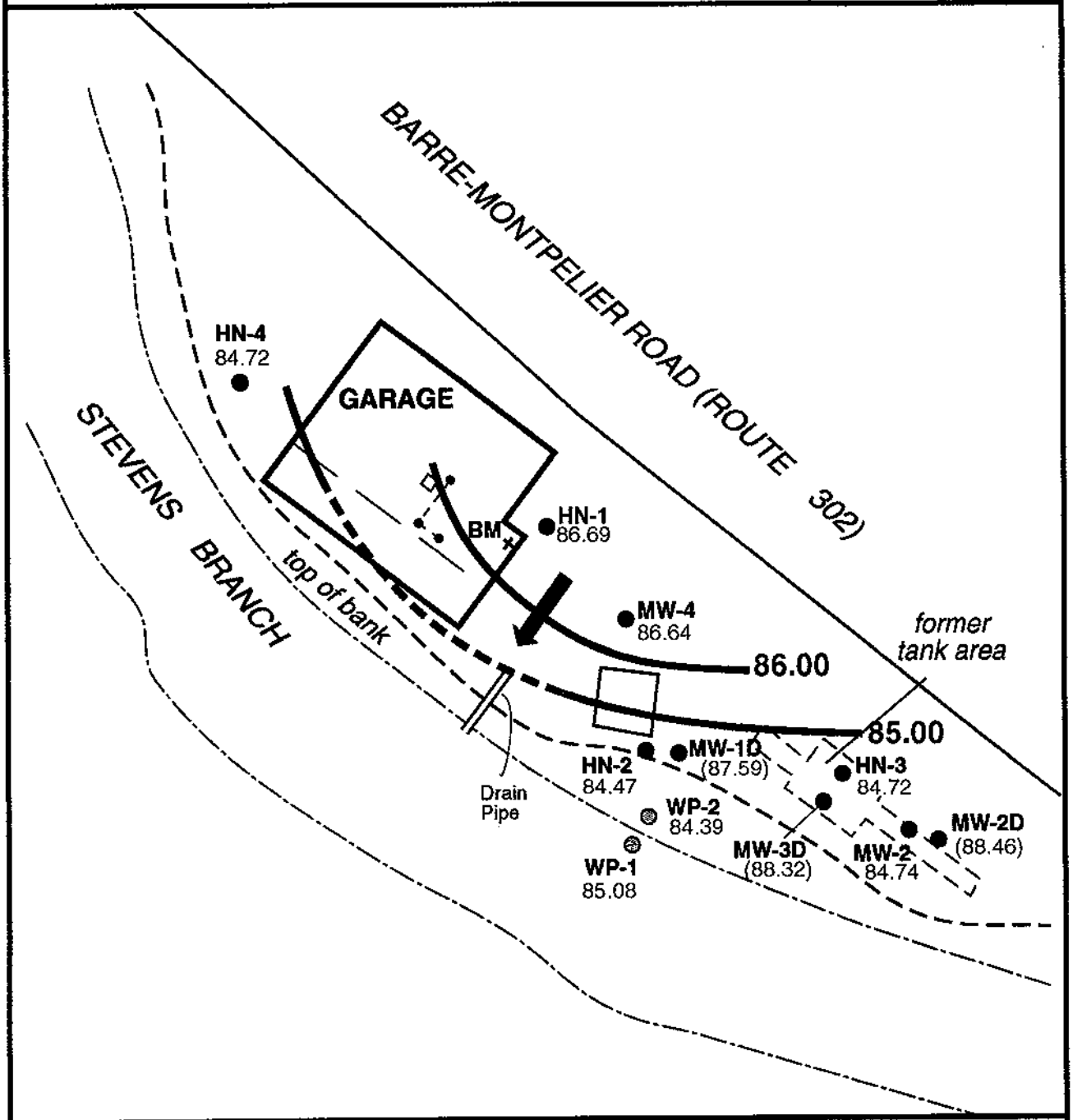
Agway, Inc.
295 Barre-Montpelier Road
Berlin, Vermont

Figure 4

Hydro-Environmental Technologies, Inc.
54 Nonset Path
Acton, MA 01720

Water Table Topography Map

November 16, 1993



N

0 60
Feet

MW-1 ● Monitoring Well
HN-1 ● Existing Well
WP-1 ◎ Well Point
BM + Bench Mark

84.89 Water Table Elevation
(88.81) Piezometric Surface, Deep Well
Equipotential Contour
Direction of Ground Water Flow

Date: 12/15/93
Revised:
Current File:
006-808 WTT.04
93/12
Compiled by: EJ
Drafted By: NBH

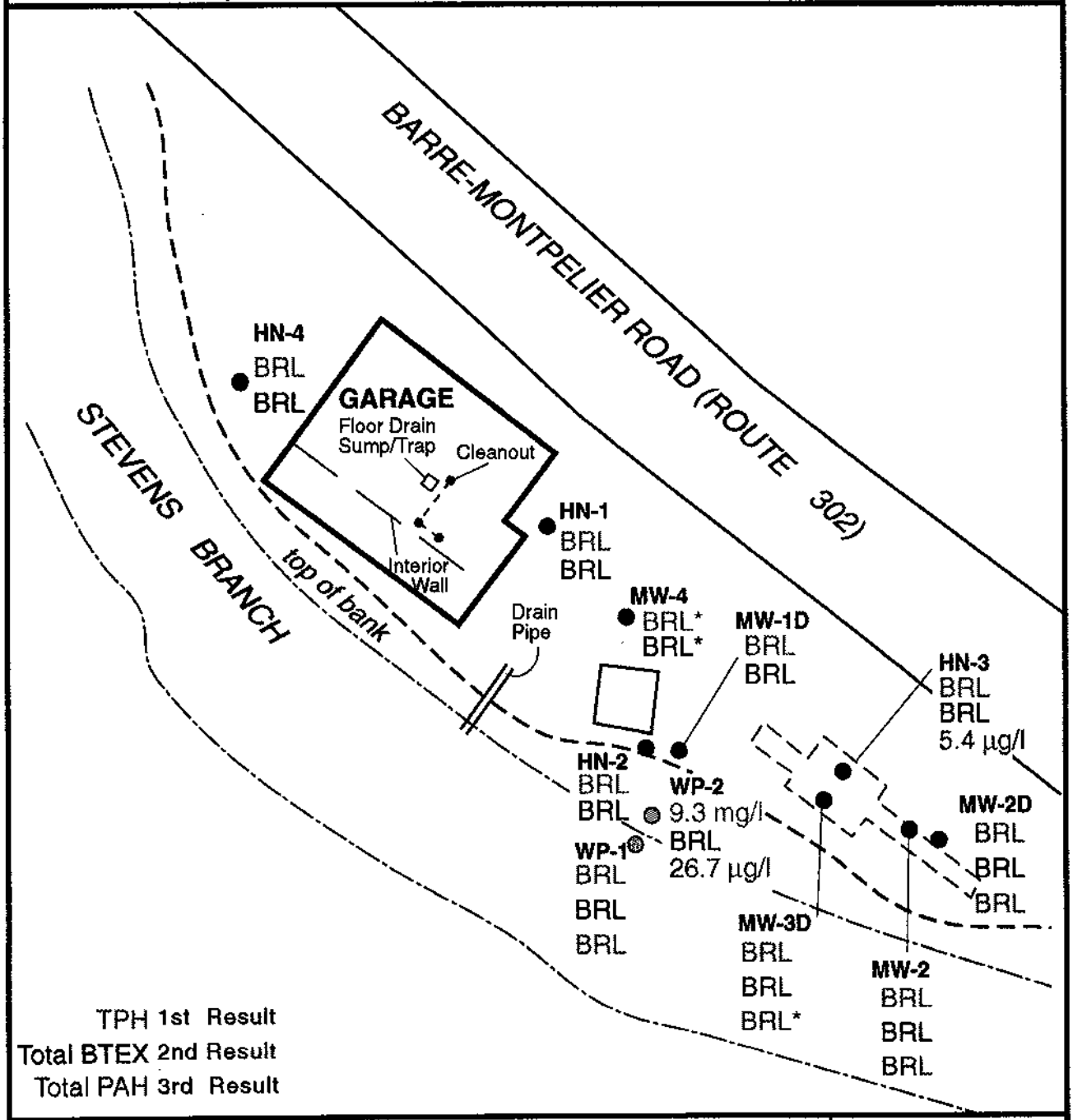
Agway, Inc.
295 Barre-Montpelier Road
Berlin, Vermont
Ground Water Contaminant
Concentration Map

Figure 5

November 16, 1993

Hydro-Environmental Technologies, Inc.

54 Nonset Path
Acton, MA 01720



N

0 60

Feet

11 mg/l Total Petroleum Hydrocarbons

1 µg/l Total BTEX

36.56 µg/l Total Polynuclear Aromatic Hydrocarbons

MW-1 ● Monitoring Well

HN-1 ● Existing Well

WP-1 ◍ Well Point

BRL Below Reporting Limit

*Average of Duplicate Analyses

Date:12/15/93
Revised:
Current File: 006-258
GWC.05 1993
Compiled by: EJ
Drafted By: NBH

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

Protocol for Sampling Ground Water for Volatile Organic Pollutants

1. Measure depth to water and depth to bottom of well.

2. Calculate well volume.

3. Using a decontaminated bailer, purge three to five well volumes of water from the well, or purge the well until dry.

4. Pour the sample into a precleaned VOA vial equipped with a backed teflon septum and preserved with HCl. Minimize agitation of the sample. Making sure the teflon side of the septum faces down, screw the vial tightly closed.

5. Invert the bottle, tap it, and inspect it to ensure no air bubbles are in the vial.

6. Place sample on ice immediately. Keep refrigerated until delivery to lab under chain of custody.

DECONTAMINATION:

If a bailer must be used in two wells in one sampling round, the well anticipated to be less contaminated will be sampled first. After sampling the first well, the bailer will be decontaminated by, at a minimum, the following rinse sequence:

Clean water	three rinses
Alconox (laboratory detergent) solution	three rinses
Clean water	three rinses
Distilled water	two rinses

Bailers exposed to free product will never be used to sample for dissolved volatile constituents.

VERMONT AGENCY OF NATURAL RESOURCES
HAZARDOUS MATERIALS MANAGEMENT
103 South Main Street
Waterbury, Vermont 05671-0404
802-244-8702

Please type (or print) *(Form designed for use on elite (12-pitch) typewriter.)* — FOR STATE USE ONLY

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: VTP000003505151 2 4
2. Page 1 of 1
Information in the shaded areas is not required by Federal law, but may be required by State law.

3. Generator's Name and Mailing Address (where returned manifests are managed)
ROYAL ENERGY
295 Barre/Montpelier Road
BERLIN, VT 05641

A. State Manifest Document Number: VT 0056646

B. Generation Site (if different): Same

4. Generator's Phone (802 229-9167

5. Transporter 1 Company Name: POLLUTION SOLUTIONS OF VERMONT, INC.
6. US EPA ID Number: VTD982766537

7. Transporter 2 Company Name
8. US EPA ID Number

C. Trans. 1 Lic. St. VT Plate # 58A96
D. Trans. 1 Phone (802-860-1200
E. Trans. 2 Lic. St. Plate #
F. Trans. 2 Phone ( )

9. Designated Facility Name and Site Address
POLLUTION SOLUTIONS OF VERMONT, INC.
2 Avenue D
Williston, VT 05495

10. US EPA ID Number: VTD982766537

G. State Facility's ID (Not Required) N/A
H. Facility's Phone (802-860-1200

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE Poisonous solids, n.o.s.(LINDANE,2,4 D) 6.1, UN2811, PGII(EPA TOXICITY)	001	DM	000500	P	EPA D012,D013, STATE D014,D020, D015,D016,
b.					EPA / STATE
c.					EPA / STATE
d.					EPA / STATE

J. Additional Descriptions for Materials Listed Above
a. SOIL CONT. W/ PESTICIDES ALSO: D032
b.
c.
d.

K. Handling Codes for Wastes Listed Above

	Interim	Final		Interim	Final
a.	S01	T	c.		
b.			d.		

15. Special Handling Instructions and Additional Information
11a WIP#021380 ERG#53

Point of Departure or Entry - City, State

Emergency Contact: Chris S. Casiello 302-860-1200

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable State law and regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity operator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Eric M Johnson, Agent for Agency	Eric M Johnson	11	16	93

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Charles F. Kuch	Charles F. Kuch	11	16	93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name	Signature	Month	Day	Year
CHRIS CASIELLO	Chris Casiello	11	16	93

PA Form 8700-22 (Rev. 9/88) Form Approved OMB No. 2050-0039 Expires 3/30/94 Previous edition is obsolete

COPY 3: FACILITY MAILS TO GENERATOR

In the event of a spill or emergency, contact the National Response Center 1-800-424-8802 and if within Vermont, The Vermont Department of Public Safety 1-800-641-5005.

COPY 3: FACILITY MAILS TO GENERATOR

VT 0056646

REPORT OF ANALYTICAL RESULTS

Case Number: D1118-04

Prepared for:

Hydro Environmental Technologies
54 Nonset Path
Acton, MA 01720

Attn: Eric Johnson

Prepared by:

New England Testing Laboratory, Inc.
1254 Douglas Avenue
North Providence, RI 02904

Date Reported: 1 DEC 1993

Reviewed By: _____
Mark H. Bishop
Laboratory Director

Sample Description

The following samples were submitted to New England Testing Laboratory on 18 NOV 1993:

"Agway/Berlin, CT"

Waters:	Soils:
1. Trip Blank	15. S1
2. HN-1	16. S2
3. HN-2	17. S3
4. HN-3	18. S4
5. HN-4	19. S5
6. MW-1D	20. S6
7. MW-2	
8. MW-2D	
9. MW-3D	
10. MW-4	
11. WP-1	
12. WP-2	
13. Duplicate 1	
14. Duplicate 2	

The custody record is included in this report. The samples were assigned an internal identification code (case number) for laboratory information management purposes. The case number for this sample submission is as follows:

Case Number: D1118-04

Request for Analysis

The following table details the analyses performed on the samples:

Sample	Analysis	Method*
D1118-04: "Agway/Berlin, CT"		
1. Trip Blank 4. HN-3 7. MW-2 8. MW-2D 9. MW-3D 11. WP-1 12. WP-2	Total Petroleum Hydrocarbons Volatile Aromatics & TBME Polynuclear Aromatic Hydrocarbons	418.1 mod. 8020 8100
2. HN-1 3. HN-2 5. HN-4 6. MW-1D 10. MW-4 13. Duplicate 1	Total Petroleum Hydrocarbons Volatile Aromatics & TBME	418.1 mod. 8020
14. Duplicate 2	Polynuclear Aromatic Hydrocarbons	8100
15. S1 16. S2 17. S3 18. S4 19. S5 20. S6	Volatile Aromatics & TBME Polynuclear Aromatic Hydrocarbons	8020 8100

*Note:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

Quality Assurance/Control Statements

The samples were found to be properly preserved/cooled upon receipt. All analyses were performed within EPA designated holding times. Procedure/calibration checks required by the designated protocols were within control limits.

ANALYTICAL RESULTS

Case No. D1118-04

Total Petroleum Hydrocarbons

Sample	Result, mg/L
Trip Blank	<2
HN-1	<2
HN-2	<2
HN-3	<2
HN-4	<2
MW-1D	<2
MW-2	<2
MW-2D	<2
MW-3D	<2
MW-4	<2
WP-1	<2
WP-2	9.3
Duplicate 1	<2

Sample: Trip Blank Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: HN-1 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: HN-2 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: HN-3 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: HN-4 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: Trip Blank

Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	N.D.	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	N.D.	1
Pyrene	N.D.	1

N.D. = Not Detected

Sample: MW-2 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: MW-2D Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: MW-3D Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: MW-4 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: WP-1 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: WP-2 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: Duplicate 1 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, ug/L[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<10

[1]Detection Limit is 1 ug/L

N.D. = Not Detected

Sample: Trip Blank

Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	N.D.	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	N.D.	1
Pyrene	N.D.	1

N.D. = Not Detected

Sample: HN-3 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	2.4	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	3.0	1
Pyrene	N.D.	1

N.D. = Not Detected

Sample: MW-2 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	N.D.	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	N.D.	1
Pyrene	N.D.	1

N.D. = Not Detected

Sample: MW-2D Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	N.D.	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	N.D.	1
Pyrene	N.D.	1

N.D. = Not Detected

Sample: MW-3D Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	N.D.	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	N.D.	1
Pyrene	N.D.	1

N.D. = Not Detected

Sample: WP-1 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	N.D.	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	N.D.	1
Pyrene	N.D.	1

N.D. = Not Detected

Sample: WP-2 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	9.0	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	3.6	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	9.7	1
Pyrene	4.4	1

N.D. = Not Detected

Sample: Duplicate 2 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration ug/L (ppb)	Detection Limit
Acenaphthene	N.D.	1
Acenaphthylene	N.D.	1
Anthracene	N.D.	1
Benzo(a)anthracene	N.D.	1
Benzo(a)pyrene	N.D.	5
Benzo(b)fluoranthene	N.D.	5
Benzo(ghi)perylene	N.D.	5
Benzo(j)fluoranthene	N.D.	5
Benzo(k)fluoranthene	N.D.	5
Chrysene	N.D.	1
Dibenz(a,h)acridine	N.D.	20
Dibenz(a,j)acridine	N.D.	20
Dibenzo(a,h)anthracene	N.D.	10
7H-Dibenzo(c,g)carbazole	N.D.	20
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	1
Fluorene	N.D.	1
Indeno(1,2,3-cd)pyrene	N.D.	5
3-Methylcholanthrene	N.D.	10
Naphthalene	N.D.	1
Phenanthrene	N.D.	1
Pyrene	N.D.	1

N.D. = Not Detected

Sample: S1 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, mg/Kg[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<1

[1]Detection Limit is 0.5 mg/Kg

N.D. = Not Detected

Sample: S2 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, mg/Kg[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<1

[1]Detection Limit is 0.5 mg/Kg

N.D. = Not Detected

Sample: S3 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, mg/Kg[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<1

[1]Detection Limit is 0.5 mg/Kg

N.D. = Not Detected

Sample: S4 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, mg/Kg[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<1

[1]Detection Limit is 0.5 mg/Kg

N.D. = Not Detected

Sample: S5 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, mg/Kg[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<1

[1]Detection Limit is 0.5 mg/Kg

N.D. = Not Detected

Sample: S6 Case No.: D1118-04

VOLATILE AROMATIC COMPOUNDS

Compound	Result, mg/Kg[1]
Benzene	N.D.
Chlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,3-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.
Ethylbenzene	N.D.
Toluene	N.D.
Xylene	N.D.
tert-Butyl Methyl Ether	<1

[1]Detection Limit is 0.5 mg/Kg

N.D. = Not Detected

Sample: S1 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration mg/Kg (ppm)	Detection Limit
Acenaphthene	N.D.	2
Acenaphthylene	N.D.	2
Anthracene	N.D.	2
Benzo(a)anthracene	N.D.	2
Benzo(a)pyrene	N.D.	10
Benzo(b)fluoranthene	N.D.	10
Benzo(ghi)perylene	N.D.	10
Benzo(j)fluoranthene	N.D.	10
Benzo(k)fluoranthene	N.D.	10
Chrysene	N.D.	2
Dibenz(a,h)acridine	N.D.	40
Dibenz(a,j)acridine	N.D.	40
Dibenzo(a,h)anthracene	N.D.	20
7H-Dibenzo(c,g)carbazole	N.D.	40
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	2
Fluorene	N.D.	2
Indeno(1,2,3-cd)pyrene	N.D.	10
3-Methylcholanthrene	N.D.	20
Naphthalene	N.D.	2
Phenanthrene	N.D.	2
Pyrene	N.D.	2

N.D. = Not Detected

Sample: S2 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration mg/Kg (ppm)	Detection Limit
Acenaphthene	N.D.	2
Acenaphthylene	N.D.	2
Anthracene	N.D.	2
Benzo(a)anthracene	N.D.	2
Benzo(a)pyrene	N.D.	10
Benzo(b)fluoranthene	N.D.	10
Benzo(ghi)perylene	N.D.	10
Benzo(j)fluoranthene	N.D.	10
Benzo(k)fluoranthene	N.D.	10
Chrysene	N.D.	2
Dibenz(a,h)acridine	N.D.	40
Dibenz(a,j)acridine	N.D.	40
Dibenzo(a,h)anthracene	N.D.	20
7H-Dibenzo(c,g)carbazole	N.D.	40
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	2
Fluorene	N.D.	2
Indeno(1,2,3-cd)pyrene	N.D.	10
3-Methylcholanthrene	N.D.	20
Naphthalene	N.D.	2
Phenanthrene	N.D.	2
Pyrene	N.D.	2

N.D. = Not Detected

Sample: S3 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration mg/Kg (ppm)	Detection Limit
Acenaphthene	N.D.	2
Acenaphthylene	N.D.	2
Anthracene	N.D.	2
Benzo(a)anthracene	N.D.	2
Benzo(a)pyrene	N.D.	10
Benzo(b)fluoranthene	N.D.	10
Benzo(ghi)perylene	N.D.	10
Benzo(j)fluoranthene	N.D.	10
Benzo(k)fluoranthene	N.D.	10
Chrysene	N.D.	2
Dibenz(a,h)acridine	N.D.	40
Dibenz(a,j)acridine	N.D.	40
Dibenzo(a,h)anthracene	N.D.	20
7H-Dibenzo(c,g)carbazole	N.D.	40
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	2
Fluorene	N.D.	2
Indeno(1,2,3-cd)pyrene	N.D.	10
3-Methylcholanthrene	N.D.	20
Naphthalene	N.D.	2
Phenanthrene	N.D.	2
Pyrene	N.D.	2

N.D. = Not Detected

Sample: S4 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration mg/Kg (ppm)	Detection Limit
Acenaphthene	N.D.	2
Acenaphthylene	N.D.	2
Anthracene	N.D.	2
Benzo(a)anthracene	N.D.	2
Benzo(a)pyrene	N.D.	10
Benzo(b)fluoranthene	N.D.	10
Benzo(ghi)perylene	N.D.	10
Benzo(j)fluoranthene	N.D.	10
Benzo(k)fluoranthene	N.D.	10
Chrysene	N.D.	2
Dibenz(a,h)acridine	N.D.	40
Dibenz(a,j)acridine	N.D.	40
Dibenzo(a,h)anthracene	N.D.	20
7H-Dibenzo(c,g)carbazole	N.D.	40
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	2
Fluorene	N.D.	2
Indeno(1,2,3-cd)pyrene	N.D.	10
3-Methylcholanthrene	N.D.	20
Naphthalene	N.D.	2
Phenanthrene	N.D.	2
Pyrene	N.D.	2

N.D. = Not Detected

Sample: S5 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration mg/Kg (ppm)	Detection Limit
Acenaphthene	N.D.	2
Acenaphthylene	N.D.	2
Anthracene	N.D.	2
Benzo(a)anthracene	N.D.	2
Benzo(a)pyrene	N.D.	10
Benzo(b)fluoranthene	N.D.	10
Benzo(ghi)perylene	N.D.	10
Benzo(j)fluoranthene	N.D.	10
Benzo(k)fluoranthene	N.D.	10
Chrysene	N.D.	2
Dibenz(a,h)acridine	N.D.	40
Dibenz(a,j)acridine	N.D.	40
Dibenzo(a,h)anthracene	N.D.	20
7H-Dibenzo(c,g)carbazole	N.D.	40
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	2
Fluorene	N.D.	2
Indeno(1,2,3-cd)pyrene	N.D.	10
3-Methylcholanthrene	N.D.	20
Naphthalene	N.D.	2
Phenanthrene	N.D.	2
Pyrene	N.D.	2

N.D. = Not Detected

Sample: S6 Case No.: D1118-04

Polynuclear Aromatic Hydrocarbons

Compound	Concentration mg/Kg (ppm)	Detection Limit
Acenaphthene	N.D.	2
Acenaphthylene	N.D.	2
Anthracene	N.D.	2
Benzo(a)anthracene	N.D.	2
Benzo(a)pyrene	N.D.	10
Benzo(b)fluoranthene	N.D.	10
Benzo(ghi)perylene	N.D.	10
Benzo(j)fluoranthene	N.D.	10
Benzo(k)fluoranthene	N.D.	10
Chrysene	N.D.	2
Dibenz(a,h)acridine	N.D.	40
Dibenz(a,j)acridine	N.D.	40
Dibenzo(a,h)anthracene	N.D.	20
7H-Dibenzo(c,g)carbazole	N.D.	40
Dibenzo(a,e)pyrene	N.D.	20
Dibenzo(a,h)pyrene	N.D.	20
Dibenzo(a,i)pyrene	N.D.	20
Fluoranthene	N.D.	2
Fluorene	N.D.	2
Indeno(1,2,3-cd)pyrene	N.D.	10
3-Methylcholanthrene	N.D.	20
Naphthalene	N.D.	2
Phenanthrene	N.D.	2
Pyrene	N.D.	2

N.D. = Not Detected

D1118-04

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue
North Providence, RI 02904

CHAIN OF CUSTODY RECORD

PROJ. NO. 06-
PROJECT NAME: Agway, Berlin CT
CLIENT: METI

SAMPLE I.D	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TESTS: 8020 + MTBE	8100 (PAH)	TPH (418.1)				REMARKS
Trip Blank	11/16/93	0:00		X		2	✓						✓
HN-1		11:15				2	✓						✓
HN-4		11:45				3	✓						✓
MW-3D		1:30				4	✓	✓	✓				✓
HN-3		1:15				3	✓		✓				✓
MW-1D		12:45				3	✓		✓				✓
WP-2		5:00				3	✓	✓	✓				✓ one sample container for 8100 + TPH
MW-2D		2:00				2	✓						✓
MW-2		1:40				2	✓						✓
WP-1		4:13				2	✓						✓
S1		3:50				1	✓						✓
S2		3:15				3	✓	✓					2 ea
S3		3:20				3	✓	✓					2 ea
S4		3:30				3	✓	✓					2 ea
S5	✓	3:35		✓		3	✓	✓					2 ea

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Eric Foss	11/17/93 5:13				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) Lynn Smith	Date/Time 11/18/93	Remarks	

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue
North Providence, RI 02904

D1118-04

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
06-	Agway, Berlin CT

CLIENT: HETI

SAMPLE I.D	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TESTS: 8020 + MEK	TESTS: 8100 (PAH)	TESTS: TPH (418.1)	REMARKS
MW-4	11/10/93	am		✓			✓		✓	
Duplicate 1	11/11/93	12:20		✓			✓		✓	
HN-2	11/10/93	12:10		✓			✓			
Trip Blank	11/10/93	am		✓				✓	✓	
HN-1	11/10/93	11:15		✓					✓	
HN-4	11/11/93	11:42		✓					✓	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/17/93 5:15	Lynn Smith	11/18/93		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

D1118-04

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue
North Providence, RI 02904

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
06-	Agway, Berlin, Vt

CLIENT: METI

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TESTS: 8020	8100 (PAH)	TPH (418.1)				REMARKS
MW-2	11/16/93	1:40		✓			✓						
HN-3	11/16/93	1:15		✓			✓						
S 1	11/16/93	3:50		✓			✓						
MW-20	11/16/93	2:00		✓			✓	✓					
WP-1	11/16/93	4:13		✓			✓	✓					
MW-2	11/16/93	1:40		✓				✓					
HN-2	"			✓				✓					
Duplicate 2	"	1:23		✓			✓						

WP

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/17/93 5:17				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
		Lynn Smith	11/18/93		